Amendments to the Specification:

Please replace paragraph 17 on page 8 with the following rewritten paragraph:

B1 Sub C1

-- At the radially inwardly end of each sidewall **16**, a number of rim-engaging surfaces **12** are provided. First, a concave groove **28** is sized and positioned around the circumference to allow the tire **10** to be seated in a rim with an inwardly-projecting seating surface. Second, a lobe-like thickened portion **30** is situated ~~on~~ at the end of each sidewall **16**, with each of the portions **30** narrowing in cross section from the sidewall to its end and having a convexly curved outer surface **32**. While a slight separation **34** is shown between the sidewalls **16** in Fig. 1, it will be recognized that upon compressively fitting the tire **10** into a rim, the lobe-like portions **30** will be compressed against each other, and the convexly curved outer surfaces will conform compressively into engagement with the internal surfaces of the rim. This means that the tire **10**, while not a closed torus when dismounted from a proper rim due to separation **34**, becomes an effectively closed torus upon mounting. Any air captured in the annular chamber **18** upon the mounting of the tire becomes entrapped and is able to provide a compressible resilient member having a different spring rate than the solid portions of the tire. Alternatively, the tire **10** may be provided with a valve **19** extending to the annular chamber **18** to allow the introduction of pressurized air into this region. In this manner, the tire **10** may be operated as a hybrid compression/tension tire, with the ability to add pressurized air to region **18** possibly providing desirable performance characteristics for various applications. As an example, in a passenger tire, the tire **10** without the introduction of pressurized air to chamber **18**, provides improved performance characteristics, which as hereafter described in more detail, may include decreased rolling resistance, resulting in increased mileage and other attributes associated with the vehicle, which can further be enhanced by the introduction of pressurized air into chamber **18**. It should be recognized for example, that the introduction of pressurized air to chamber **18** will further decrease the rolling resistance of the tire **10**, which for various applications may be desirable. At the same time, the introduction of pressurized air to chamber **18** is not necessary to support the loads for a given duty cycle, and therefore if pressurization is lost from chamber **18**, the tire **10** will still perform, providing extended mobility to the vehicle on which it is used. Further, the construction of tire **10** according to this embodiment is distinct from a conventional tire, where virtually all contact between the rim and the tire is borne on radially extending sides of the rim and little or none of the contact is made with the radially facing surfaces of the rim. The tire **10** provides support by means of the sidewall **16** in conjunction with the cross member **13**, wherein

Sub C1
B1

when mounted to a vehicle, the structure of tire **10** will be loaded under compression to support the vehicle in conjunction with the rim thereof. The design of the tire **10** provides an anisotropic assembly with structurally stable sidewalls **16** even in the absence of any positive pressurization beyond ambient in the annular chamber **18**.

Please replace paragraph 18 on page 9 with the following rewritten paragraph:

Sub C2
B2

It will also be recognized that this possible hybrid tensional-compressional system may be manufactured using a purely liquid phase manufacturing scheme. The tire **10** according to the invention may be manufactured by any suitable manufacturing method, but contemplates a purely liquid phase spin casting manufacturing process to provide significant cost advantages as well as manufacturing control. The invention also contemplates the use of homogenous elastomeric materials, such as urethanes, polyurethanes, composites of polyethylurethane elastomeric particles, rubber compounds, thermoplastic elastomers or combinations thereof, either in mixture or in a laminated construction. Thus, the only component in this embodiment of the invention is the homogeneous mixture, and does not include any structurally reinforcing materials. The ability to spin cast tires **10** using a homogenous material such as polyurethane, may provide the ability to form a non-porous outer tread or skin with the material becoming increasingly porous downwardly from the tread to the inner surface. The tire **10** then functions as anisotropic assembly, which is capable of carrying the load in compression. The ability to cast tire **10** and form tire **10** in a liquid phase manufacturing process insures consistency in the manufacturing process and materials used to form tire **10**. This type of manufacturing process provides a high degree of control over the characteristics of the material produced by the manufacturing process, while drastically reducing the cost of investment in the manufacturing process. The control over the material properties as well as shape and design of the tire **10** therefore allow a great amount of flexibility to the designer for implementing tires **10** according to the invention for a variety of different and varying applications. Thus, the design of tire **10** as shown in this embodiment is only representative of the types of designs possible in accordance with the invention. Depending upon the duty cycle for which the tire **10** is designed, the characteristics of the sidewalls **16** may be modified to support the vehicle load under compression. In all designs, the tire **10** may be configured to fit in association with a standard vehicle rim, whether associated with a bicycle, passenger vehicle, heavy vehicle or the like. In the embodiment shown in Fig. 1, the tire **10** is designed for a power bike type of vehicle intended for road use.

Please replace paragraph 25 on page 13 with the following rewritten paragraph:

SW63 B3

-- In Table 2 and Table 3, tread design data and tire design data are set forth for known pneumatic tires and non-pneumatic tires according to the invention.

Please replace Table 2 on page 14 with the following rewritten Table 2:

B4 SW6 C47

P=Pneumatic N=Non-Pneumatic	Manufacturer Type	Tire Design Data								
		OD IN	SW In	*MF Lbs/Ft^3 Matl. Density	SSR @ 150 lbs Lb/In Static Spring ratio	d In defl.	Wc Ft-Lbs Work of compression	*m %	Wt. Lbs	Vol Ft^3
P	Specialized MT	26.559	1.936	21.800	193.000	0.777	9.7125	-0.7350	2.26	0.1037
P	Kenda RD	25.906	1.762	14.550	303.500 302.100	0.415	5.1880	1.3080	2.06	0.1416
P	Continent-al Electric	25.625	1.747	12.500	277.300	0.541	6.7630	1.2360	1.72	0.1376
P	St. Electric	26.546	2.130	16.850	214.600	0.683	8.5380	0.1720	2.80	0.1662
P	Cheng Shin MT EST	26.187	1.961	21.997	247.930	0.605	7.5630	2.0700	2.44	0.1109
N	Example #1	25.406	1.878	30.760	281.950	0.532	6.650	3.9650	2.54	0.0826
N	Example #2	25.640 25.270	1.840 1.850	23.300 22.800	280.400 278.700	0.535 0.548	6.6880 6.8500	4.2660 1.9790	2.66 2.52	0.1142 0.1102
N	Example #3	25.937	1.897	27.040 22.830	354.000 279.300	0.577	7.2130	2.8910	3.79 3.20	0.1402 0.1402
N	Example #4	25.690	1.790	21.900	367.650	0.408	5.1000	2.0000	2.22	0.1012
		Shape Index		Strength Index	Siffness Index		Rolling Resistance Index	Mounting Ease Index	Economic Index	Size Index

Please replace paragraph 26 on page 15 with the following rewritten paragraph:

Sub C5 B5

-- Physical characteristics of pneumatic tires for use with power bikes are shown, along with tire design data and performance characteristics. It is noted for example with the MT model tire produced by Specialized, the tire has a stiffness index SSR at a 150 lb. load, of 193.0 LB/IN, yielding a rolling resistance index W_C of 9.7125 FT-LBS. For the non-pneumatic tires according to the present invention, examples 1-4 are shown having varying tread and tire design characteristics, but in each case, providing performance characteristics which are greatly improved over the pneumatic tires shown in Table 2 <u>and Table 3</u>. In each of the examples 1-4, it is noted that relatively high stiffness indexes (SSR) are provided in the tire designs, yielding a rolling resistance index (W_C) which is significantly reduced. Although certain of the known pneumatic tires have reasonably good rolling resistance indexes (W_C), being similar to that achieved in the tire designs according to the invention, it should be apparent that the tire design according to the invention produces lower rolling resistance generally, and significant improvements for certain tire designs. Further, as previously mentioned, rolling resistance may be further reduced by introducing pneumatic pressure to the annular chamber formed in the closed torus tire design according to the invention.

Please replace paragraph 38 on page 24 with the following rewritten paragraph:

B6 Sub C11

-- The present invention is directed at a tire design, which allows for proper operational characteristics in all operating conditions, and is not dependent on pneumatic pressurization. The tire is mounted in a wheel rim, and comprises an integral homogeneous toroidal body having a pair of spaced-apart radially extending sidewalls and a cross member~~. Each sidewall has a first and a second end and an internal face and an external face, with the second end of each of the sidewalls integrally merging~~<u>, wherein an end of each sidewall integrally merges</u> into the cross member. A set of rim-engaging surfaces exist at each rim-contacting sidewall end and allows effective mounting to conventional tire rims. An annular chamber is defined by the internal faces of the sidewalls and an internal top wall on the cross member opposite the at least one road engaging surface. The set of rim-engaging surfaces includes a lobe-like portion, which are separable when the tire is not mounted on the rim and close the annular chamber when compressed into engagement when mounting the tire in the rim.

Please add the following new Table 3 after the Table 2 ending page 14:

SubC6 B7

P=Pneumatic N=Non-Pneumatic	Manufacturer Type	Tread Design Data							
		26x outer dia.	N/S In Non-skid depth	N/G % Net/gross	V/G % Vol/gross	UVV In^3/In Unit Void Vol.	Hardness Shore A		A.N/G %A Area N/G
							TD	SW	
P	Specialized MT	1.95	0.142	0.250	0.75	0.10650	62	N/A	15.50
P	Kenda RD	1.95	0.085	0.490	0.51	0.04335	70	71	34.80
P	Continent-al Electric	1.60	0.077	0.520	0.48	0.03696	67	70	34.80
P	St. Electric	2.15	0.110	0.676	0.33	0.03630	70	78	42.30
P	Cheng Shin MT EST	1.95	0.177	0.440	0.56	0.09912	65	76	28.60
N	Example #1	1.95	0.156	0.50	0.50	0.07800	87	62	39.00
N	Example #2	1.95	0.127	0.060	0.40	0.05080	93 82	57 54	37.20 37.80
N	Example #3	1.95	0.125	0.660	0.34	0.04250	100+ 90	61	39.20
N	Example #4	1.95	0.177	0.460	0.54	0.09558	62	N/A	28.50
			Wear Index			Wet Traction Index	Grip Index		Dry Traction Index